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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/646,228	09/14/2000	Hideyoshi Horimai	107318	5554
25944 7590 03/09/2007 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER KUMAR, SRILAKSHMI K	
			ART UNIT	PAPER NUMBER
			2629	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/09/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/646,228

Applicant(s)

HORIMAI, HIDEYOSHI

Examiner

Srilakshmi K. Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-15, 17-25, 27-32, 35-44 and 46-51 is/are pending in the application.
- 4a) Of the above claim(s) 2-15, 17, -25, 27-32, 35-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44 and 46-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/2001.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

The following office action is in response to the Request for Continued Examination, filed on December 13, 2006. Claims 2-15, 17-25, 27-32, 35-44, and 46-51 are pending. Claims 2-15, 17-25, 27-32, 35-43 have been withdrawn from consideration. Claims 16, 26, 33 and 34 have been cancelled. Claims 44 and 46-51 have been elected for examination. No claims have been amended.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 44, 46-51 rejected under 35 U.S.C. 103(a) as being unpatentable over Travis (US 5,132,839) in view of Hattori et al (US 5,689,316).

In reference to claims 44 and 49, Travis teaches a three-dimensional image display comprising a two-dimensional image forming means for forming a plurality of two-dimensional images by scanning light (col. 3, lines 13-16). Travis does not disclose where the scanning light has been subjected to time-modulation based on information on rearrangement of data of each of pixel of the plurality of two-dimensional images. Hattori discloses where the scanning light has been subjected to time modulation based on the information on rearrangement of data of each of the pixel of the plurality of two-dimensional images in col. 3, lines 1-23. It would have been obvious to one of ordinary skill in the art to incorporate the time modulation disclosed by Hattori

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into the display of Travis as the time modulation of Hattori provides real time display of an image as disclosed by Hattori in col. 1, lines 34-44.

Travis discloses three-dimensional image forming means for forming a three-dimensional image by projecting the plurality of two-dimensional images formed by the two-dimensional image forming means in directions different from each other (51-59).

In reference to claim 46, Travis teaches that the two-dimensional image forming means is a created by scanning light (column 3, lines 13-16).

The three-dimensional image is formed by projecting the two-dimensional images in directions different from each other (figure 5; column 8, lines 50-55).

In reference to claims 47 and 48, Travis teaches that the controller unit (item 99), coordinates the light projection direction and the synchronization data necessary for proper three-dimensional display (column 8, lines 55-63 and column 5, lines 38-45).

In reference to claim 50, Travis teaches wherein the three dimensional image forming means further has a region in which synchronization information for synchronized control of the display as a whole is recorded (col. 5, lines 38-45, col. 8, lines 55-63).

In reference to claim 51, limitations of claim 44, and further comprising, Travis discloses wherein the three dimensional image forming means is fixed (figs. 1-7).

Response to Arguments

3. Applicant's arguments filed December 13, 2006 have been fully considered but they are not persuasive.

With respect to claims 16, 26, 33 and 34, as applicant has cancelled these claims, the rejection and arguments are moot.

With respect to claims 44, 46-51, applicant argues where the prior art of record Travis and Hattori, individually, or in combination fail to teach or suggest a three dimensional image display including at least two dimensional image forming means for forming a plurality of two dimensional images by scanning light which has been subjected to time modulation based on information on rearrangement of data of each of pixel of the plurality of two dimensional images, examiner, respectfully, disagrees. As disclosed in the above rejection, Travis teaches a three-dimensional image display comprising a tow dimensional image forming means by scanning light in col. 3, lines 13-16. Travis does not teach wherein the scanning light has been subjected to time modulation. Hattori teaches in col. 3, lines 1-23, wherein the scanning light is subjected to modulation, as they enable the information for the formation of the three dimensional image. Thus, teaching the use of modulation in order to obtain an image.

With respect to claims 49 and 50, Applicant argues where Travis fails to teach a three dimensional image display including at least three dimensional image forming means for forming a three dimensional image by projecting the light emitted by the two dimensional image forming means in different directions in accordance with positions of incidence to project the plurality of two dimensional images in directions different from each other, wherein the three dimensional image forming means has a region in which position information used for controlling the positions of incidence of the light emitted by the two dimensional image forming means is recorded. Examiner respectfully, disagrees. Travis teaches in col. 3, lines 51-59 where different views of a subject are projected in different directions (angles) from the apparatus, the different views corresponding to the different views of a three dimensional subject which would be seen from different directions. In other words, lateral multiplexing is utilized such that the

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two eyes of an observer see different views because each eye observes from a separate position; and the views seen by the observer change as he moves his head round the display. However, instead of conventional lateral multiplexing, (such as might be used in holograms and lenticular screen displays) where several views are presented simultaneously, the invention further utilizes time multiplexing. Thus, the different views are presented in sequence while the position from which the display is visible is adjusted, provided the angle between the views is sufficiently fine and the sequence of views is repeated at sufficiently short intervals, the image displayed by the apparatus will appear smooth and three dimensional.

With respect to applicant's arguments in regards to where the combination of Travis and Hattori is not proper, examiner, respectfully disagrees. The combination of Travis and Hattori is proper as the prior art of Hattori real time display of an image as disclosed by Hattori in col. 1, lines 34-44.

As disclosed above, the combination of Travis and Hattori teach the limitations set forth in the claims of the instant application, therefore, the rejection is maintained and made FINAL.

Conclusion

4. This is a Request for Continued Examination of applicant's application. Applicant has not amended any of the claims from the previous rejection of April 19, 2006. All claims are drawn to the same invention, therefore, could have been finally rejected on the grounds and art of record. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 571 272 7769. The examiner can normally be reached on 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKK
March 1, 2007

Srilakshmi K. Kumar
Examiner
Art Unit 2629


SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER